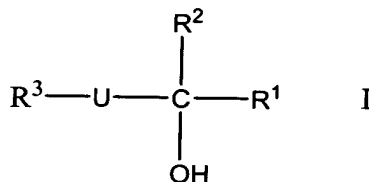


IN THE CLAIMS

1-14 (Cancelled):

15 (Currently Amended): A process for the preparation of a compound of the general formula I by subjecting a compound of general formula V to an electrochemical reaction in an electrolysis liquid with an alcohol of the general formula II in the presence of an auxiliary electrolyte and catalytic amounts of at least one metal salt (S) derived from a metal from sub-groups (groups) Ib (11), IIb (12), VIb (6), ~~and~~ or VIIIb (8, 9, 10) of the periodic chart or from lead, tin or rhenium,

wherein the compound of general formula I is:



where R^1 , R^2 , R^3 are each independently hydrogen, C_1 - to C_{20} -alkyl, C_2 - to C_{20} -alkenyl, C_2 - to C_{20} -alkynyl, C_3 - to C_{12} -cycloalkyl, C_4 - to C_{20} -cycloalkyl-alkyl, C_1 - to C_{20} -hydroxyalkyl, or aryl or C_7 - to C_{20} -arylalkyl which is unsubstituted or substituted by C_1 - to C_8 -alkyl, C_1 - to C_8 -alkoxy, halogen, C_1 - to C_4 -haloalkyl, C_1 - to C_4 -haloalkoxy, phenyl, phenoxy, halophenyl, halophenoxy, carboxyl, C_2 - to C_8 -alkoxycarbonyl or cyano, or

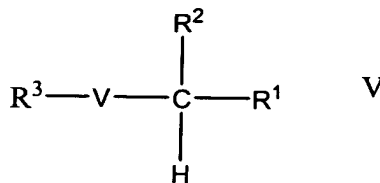
R^1 and R^2 ~~or~~ R^3 together are a C_2 - to C_9 -alkandiyl unit which is unsubstituted, monosubstituted or disubstituted by C_1 - to C_8 -alkyl, C_1 - to C_8 -alkoxy and/or halogen and in which one or two methyl groups may also be replaced by a $(\text{CH}=\text{CH})$ unit and R^3 is additionally an ~~acetylated~~ acetalated carbonyl group in which the alkoxy groups ~~are~~ is derived from an alcohol of the general formula II:



where R^4 is C_1 - to C_6 -alkyl, and

U is an ~~acetylated~~ acetalated carbonyl group in which the alkoxy groups ~~are~~ is derived from an alcohol of the general formula II; and

wherein the compound of general formula V is:



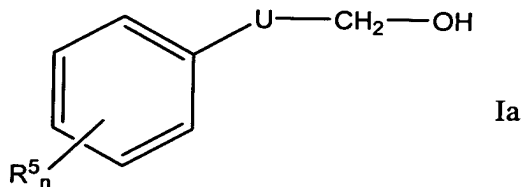
wherein:

V is a carbonyl group, or an ~~acetylated~~ acetalated carbonyl group having C₁- to C₆-alkoxy,

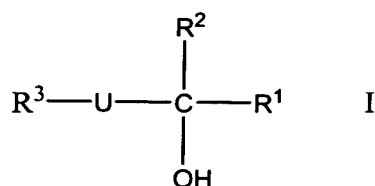
R¹, R² and R³ are each independently hydrogen, C₁- to C₂₀-alkyl, C₂- to C₂₀-alkenyl, C₂- to C₂₀-alkynyl, C₃- to C₁₂-cycloalkyl, C₄- to C₂₀-cycloalkyl-alkyl, C₁- to C₂₀-hydroxyalkyl, or aryl or C₇- to C₂₀-arylalkyl which is unsubstituted or substituted by C₁- to C₈-alkyl, C₁- to C₈-alkoxy, halogen, C₁- to C₄-haloalkyl, C₁- to C₄-haloalkoxy, phenyl, phenoxy, halophenyl, halophenoxy, carboxyl, C₂- to C₈-alkoxycarbonyl or cyano, or

R¹ and R² together are a C₂- to C₉-alkandiyl unit which is unsubstituted, monosubstituted or disubstituted by C₁- to C₈-alkyl, C₁- to C₈-alkoxy and/or halogen and in which one or two methyl groups may also be replaced by a (CH=CH) unit and R³ is additionally an ~~acetylated~~ acetalated carbonyl group having C₁- to C₆-alkoxy.

16 (Previously Presented): The process of Claim 15 for the preparation of a compound of the general formula Ia:



where U is as defined under the formula I,



n is 0, 1, 2 or 3, and

R⁵ is C₁- to C₈-alkyl, C₁- to C₈-alkoxy, halogen, C₁- to C₄-haloalkyl, C₁- to C₄-haloalkoxy, phenyl, phenoxy, halophenyl, halophenoxy, carboxyl, C₂- to C₈-alkoxycarbonyl or cyano.

17 (Previously Presented): The process of Claim 16, where the compound of the general formula Ia is 2-phenyl-2,2-dimethoxyethanol.

18 (Currently Amended): The process of Claim 15, where the compound of the general formula I is a compound of the general formula Ib:



where m is a number from 1 to 10, and R⁴ is as defined under the formula II, and the compound of the general formula V is a compound of the general formula Vb:



19 (Previously Presented): The process of Claim 15, where the compound of the formula I is 2,2,3,3-tetramethoxypropanol, and the starting compound employed is methylglyoxal dimethyl acetal.

20 (Previously Presented): The process of Claim 15, where the anions of the metal salt (S) are derived from a mineral acid.

21 (Previously Presented): The process of Claim 15, where the anions of the metal salt (S) are phosphate, sulfate, nitrate, perchlorate or halide.

22 (Previously Presented): The process of Claim 15, where the cations of the metal salt (S) are iron, nickel, platinum, palladium, cobalt, zinc, silver or copper.

23 (Previously Presented): The process of Claim 15, where the electrolysis liquid contains from 1 to 1,000 ppm by weight of metal ions of the metal salt (S), based on the total amount of electrolysis liquid.

24 (Previously Presented): The process of Claim 15, where the electrolysis liquid contains a halogen-containing auxiliary electrolyte.

25 (Currently Amended): The process of Claim 15, where the electrolysis liquid consists essentially of:

- a starting compound of the general formula V,
- an alcohol of the general formula II,
- a halogen-containing auxiliary electrolyte,
- a catalytic amount of the metal salt (S),
- optionally the desired products of the general formulae I,
- optionally other by-products of electrolysis which are derived from the compounds of the general formulae I and V, and
- optionally, other conventional co-solvents.

26 (Currently Amended): The process of Claim 15, wherein
the proportion of the starting compound(s) and product(s) of the general formulae I and V and of the other by-products of electrolysis from the abovementioned compound(s) is from 1 to 70% by weight,
the proportion of the alcohol of the general formula II is from 14.9 to 94.9% by weight,
the proportion of said auxiliary electrolyte is from 0.1 to 5% by weight, and
the proportion of any co-solvents present is from 0 to 70% by weight
based on the electrolysis liquid.

27 (Currently Amended): The process of Claim 15, wherein the ~~electrolysis~~
electrochemical reaction is carried out in an undivided electrolysis cell.

28 (Previously Presented): The process of Claim 15, where the anodes employed are made of noble metals, noble-metal oxides, graphite or carbon materials, and the cathodes employed are made of iron, steel, nickel, zinc, noble metals, graphite or carbon materials.

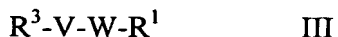
29 (Currently Amended): A process for preparing a compound of general formula III
by comprising:

subjecting a compound of general formula Va to an electrochemical reaction in an electrolysis liquid with an alcohol of the general formula II in the presence of an auxiliary electrolyte and a catalytic amount of a metal salt (S) derived from a metal from sub-groups (groups) Ib (11), IIb (12), VIb (6), ~~and~~ or VIIIb (8, 9, 10) of the periodic chart or from lead, tin or rhenium;

wherein the alcohol of general formula II is:

R⁴-OH, wherein R⁴ is C₁₋₆ alkyl,

wherein the compound of general formula III is:

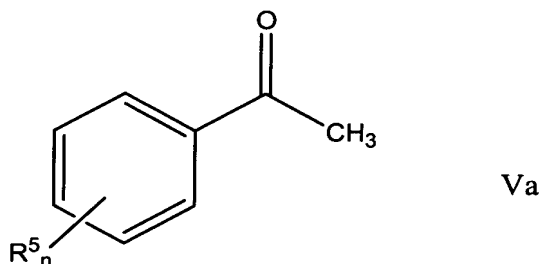


wherein R¹ is hydrogen, and

R³ is exclusively aryl which is unsubstituted, or substituted by C₁- to C₈-alkyl, C₁- to C₈-alkoxy, halogen, C₁- to C₄-haloalkyl, C₁- to C₄-haloalkoxy, phenyl, phenoxy, halophenyl, halophenoxy, carboxyl, C₂- to C₈-alkoxycarbonyl or cyano; and

V and W are independently a carbonyl group, or an ~~acetylated~~ acetalated carbonyl group having C₁- to C₆-alkoxy, with the proviso that one of the groups V and W is a carbonyl group and the other is an ~~acetylated~~ acetalated carbonyl group; and

wherein the compound of general formula Va is:

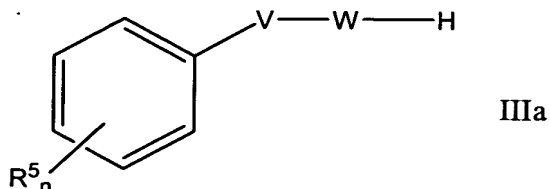


wherein:

R⁵ is C₁- to C₈-alkyl, C₁- to C₈-alkoxy, halogen, C₁- to C₄-haloalkyl, C₁- to C₄-haloalkoxy, phenyl, phenoxy, halophenyl, halophenoxy, carboxyl, C₂- to C₈-alkoxycarbonyl or cyano, and

n is 0, 1, 2 or 3.

30 (Currently Amended): The process of Claim 29, wherein ~~for the preparation of a~~ compound of ~~the~~ general formula IIIa:



~~where n, V, and W and R^S are as defined under formula Ia or III is prepared.~~

31 (Currently Amended): The process of Claim 30, where the compound of the general formula IIIa is 2-phenyl-2,2-dimethoxyacetaldehyde or 2-phenylglyoxal dimethyl acetal.

32 (Previously Presented): The process of Claim 29, where the anions of the metal salt (S) are derived from a mineral acid.

33 (Previously Presented): The process of Claim 29, where the anions of the metal salt (S) are phosphate, sulfate, nitrate, perchlorate or halide.

34 (Previously Presented): The process of Claim 29, where the cations of the metal salt (S) are iron, nickel, platinum, palladium, cobalt, zinc, silver or copper.

35 (Previously Presented): The process of Claim 29, where the electrolysis liquid contains from 1 to 1,000 ppm by weight of metal ions of the metal salt (S), based on the total amount of electrolysis liquid.

36 (Previously Presented): The process of Claim 29, where the electrolysis liquid contains a halogen-containing auxiliary electrolyte.

37 (Currently Amended): The process of Claim 29, where the electrolysis liquid consists essentially of:

a starting compound of ~~the~~ general formula Va,
an alcohol of ~~the~~ general formula II,
a halogen-containing the auxiliary electrolyte,
a catalytic amount of the metal salt (S),
optionally the desired products of ~~the~~ general formulae III,
optionally other by-products of electrolysis which are derived from the compounds of
~~the~~ general formulae III and V, and
optionally, other conventional co-solvents.

38 (Currently Amended): The process of Claim 29, wherein
the proportion of the starting compound(s) and product(s) of ~~the~~ general formulae III
and V and of ~~the~~ other by-products of electrolysis from the above mentioned compound(s) is
from 1 to 70% by weight,
the proportion of the alcohol of ~~the~~ general formula II is from 14.9 to 94.9% by
weight,
the proportion of said auxiliary electrolyte is from 0.1 to 5% by weight, and
the proportion of any co-solvents present is from 0 to 70% by weight
based on the electrolysis liquid.

39 (Currently Amended): The process of Claim 29, wherein the ~~electrolysis~~
electrochemical reaction is carried out in an undivided electrolysis cell.

40 (Previously Presented): The process of Claim 29, where the anodes employed are
made of noble metals, noble-metal oxides, graphite or carbon materials, and the cathodes
employed are made of iron, steel, nickel, zinc, noble metals, graphite or carbon materials.

41 (Currently Amended): A process for preparing a compound of the general formula IV ~~by comprising:~~

subjecting a compound of general formula Vb to an electrochemical reaction in an electrolysis liquid with an alcohol of the general formula II in the presence of an auxiliary electrolyte and a catalytic amount of at least one metal salt (S) derived from a metal sub-groups (groups) Ib (11), IIb (12), VIb (6), ~~and~~ or VIIIb (8, 9, 10) of the periodic chart or from lead, tin or rhenium;

wherein the alcohol of general formula II is:

R⁴-OH, wherein R⁴ is C₁₋₆ alkyl,

wherein the compound of general formula IV is:



wherein:

R³ is exclusively aryl which is unsubstituted, or substituted by C₁- to C₈-alkyl, C₁- to C₈-alkoxy, halogen, C₁- to C₄-haloalkyl, C₁- to C₄-haloalkoxy, phenyl, phenoxy, halophenyl, halophenoxy, carboxyl, C₂- to C₈-alkoxycarbonyl or cyano;

R⁴ is C₁- to C₆-alkyl; and

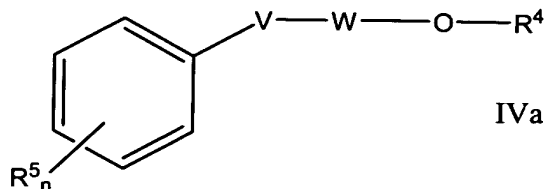
V and W are independently a carbonyl group, or an ~~acetylated~~ acetalated carbonyl group having C₁- to C₆-alkoxy, with the proviso that one of the groups V and W is a carbonyl group and the other is an acetylated carbonyl group;

wherein the compound of general formula Vb is:



wherein m is 1, 2, 3, 4, 5, 6, 7, 8, 9 or 10.

42 (Currently Amended): ~~The process of Claim 41~~ A process for the preparation of a compound of the general formula IVa:



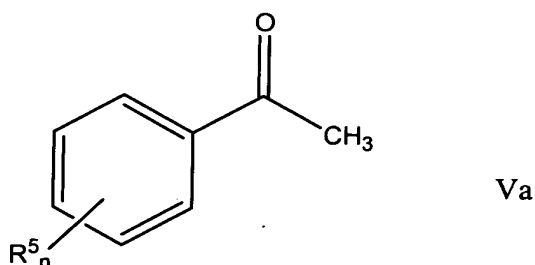
~~where n, V, W, R⁴ and R⁵ are as defined under the formula Ia or IIIa~~

comprising:

subjecting a compound of general formula Va to an electrochemical reaction in an electrolysis liquid with an alcohol of general formula II in the presence of an auxiliary electrolyte and a catalytic amount of at least one metal salt (S) derived from a metal sub-groups (groups) Ib (11), IIb (12), VIb (6), or VIIIb (8, 9, 10) of the periodic chart or from lead, tin or rhenium;

~~by employing as a starting compound of the general formula V, a compound of the general~~

wherein formula Va is:



where in formula IVa and Va,

n is 0, 1, 2 or 3 and

R⁵ is C₁- to C₈-alkyl, C₁- to C₈-alkoxy, halogen, C₁- to C₄-haloalkyl, C₁- to C₄-haloalkoxy, phenyl, phenoxy, halophenyl, halophenoxy, carboxyl, C₂- to C₈-alkoxycarbonyl or cyano are as defined under the formula Ia; and

in formula IVa:

V and W are independently a carbonyl group, or an acetylated acetalated carbonyl group having C₁- to C₆-alkoxy, with the proviso that one of the groups V and W is a carbonyl group and the other is an acetalated carbonyl group; and

R⁴ is C₁₋₆ alkyl

~~V, W, R⁴ are as defined under the formula Ia or IIIa .~~

43 (Previously Presented): The process of Claim 42, where the compound of the general formula IVa is phenylglyoxylic acid methyl orthoester, and the compound of the general formula Va is acetophenone.

44 (Previously Presented): The process of Claim 41, where the anions of the metal salt (S) are derived from a mineral acid.

45 (Previously Presented): The process of Claim 41, where the anions of the metal salt (S) are phosphate, sulfate, nitrate, perchlorate or halide.

46 (Previously Presented): The process of Claim 41, where the cations of the metal salt (S) are iron, nickel, platinum, palladium, cobalt, zinc, silver or copper.

47 (Previously Presented): The process of Claim 41, where the electrolysis liquid contains from 1 to 1,000 ppm by weight of metal ions of the metal salt (S), based on the total amount of electrolysis liquid.

48 (Previously Presented): The process of Claim 41, where the electrolysis liquid contains a halogen-containing auxiliary electrolyte.

49 (Currently Amended): The process of Claim 41, where the electrolysis liquid consists essentially of:

- a starting compound of ~~the~~ general formula Vb ,
- an alcohol of ~~the~~ general formula II,
- a halogen-containing auxiliary electrolyte,
- a catalytic amount of the metal salt (S),
- optionally the desired products of ~~the~~ general formulae IV,
- optionally other by-products of electrolysis which are derived from the compounds of the general formulae IV and Vb , and
- optionally, other conventional co-solvents.

50 (Currently Amended): The process of Claim 41, wherein
the proportion of the starting compound(s) and product(s) of the general formulae IV and Vb and of ~~the~~ other by-products of electrolysis from the above mentioned compound(s) is from 1 to 70% by weight,

the proportion of the alcohol of ~~the~~ general formula II is from 14.9 to 94.9% by weight,

the proportion of the auxiliary electrolyte is from 0.1 to 5% by weight, and

the proportion of any co-solvents present is from 0 to 70% by weight
based on the electrolysis liquid.

Application No. 10/030,173

In reply to Office Action of August 12, 2003

51 (Currently Amended): The process of Claim 41, wherein the ~~electrolysis~~
electrochemical reaction is carried out in an undivided electrolysis cell.

52 (Previously Presented): The process of Claim 41, where the anodes employed are made of noble metals, noble-metal oxides, graphite or carbon materials, and the cathodes employed are made of iron, steel, nickel, zinc, noble metals, graphite or carbon materials.